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BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60611

EXAMINER	
BARAN, MARY C	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/931,145	HUBER ET AL.	
	Examin r	Art Unit	
	Mary Kate B Baran	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-85* is/are pending in the application.

4a) Of the above claim(s) *36-68* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22,24-35,69-77 and 79-85* is/are rejected.

7)☒ Claim(s) *23 and 78* is/are objected to.

8)☒ Claim(s) *1-85* are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 August 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

I. The species best illustrated by claims 1-35.

II. The species best illustrated by claims 36-44 and 63-68.

III. The species best illustrated by claims 45-48.

IV. The species best illustrated by claims 49-57.

V. The species best illustrated by claims 58-62.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Claims 69-85 link the species of groups I and V, if any of 69-85 shall be deemed to having allowable subject matter, the species shall be rejoined.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include

all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with James Katz on 22 January 2004 a provisional election was made without traverse to prosecute the invention of an IED having power management functionality, as recited by claims 1-35 and 69-85. Affirmation of this election must be made by applicant in replying to this Office action. Claims 36-68 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Information Disclosure Statement

3. The information disclosure statements filed 25 August 2003 and 01 April 2002 fail to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other

information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

4. The drawings are objected to because Figure 4 has been duplicated. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

(a) On page 2 [0003] and [0004] cite applications but leaves the application numbers blank.

(b) On page 3 line 8, "upgrades" should be – upgrade –.

(c) On page 6 line 13, "is" should be – are –.

(d) On page 9 line 21, "arraying" should be – array –.

(e) On page 19 line 19, "and" should be – an –.

(f) On page 2 of the Preliminary Amendment filed 2 January 2003, an application is referenced; however, the patent number is left blank.

Appropriate correction is required.

Claim Objections

6. Claim 24 is objected to because of the following informalities: on page 53, claim 24 line 6, "functionality" should be – functionality. –. Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13, 17-20, 22, 24, 25, 27, 69-75, 77, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by Sezi et al. ("New Intelligent Electronic Devices Change the Structure of Power Distribution Systems") (hereinafter Sezi).

Referring to claims 1 and 69, an IED (see Sezi, page 944 Figure 1) comprising: a base module (see Sezi, page 944 column 2 "II. Structural Evolution of Intelligent Electronic Devices" line 1 – page 945 column 1 line 5), said base module including: a power monitoring circuit operative to monitor a parameter of a portion of a power distribution system and generate an analog signal representative thereof (see Sezi, page 948 column 2 "D. Metering and Power Quality Analysis" lines 10-12); a processor coupled with said power monitoring circuit, said processor comprising an analog to digital converter operative to convert said analog signal to a digital signal representative thereof, said processor operative to implement first power management functionality and generate first power management data (see Sezi, page 950 column 1 "Self-

Monitoring and External Circuit Monitoring" lines 22-26); at least one of a display and a communications interface coupled with said processor (see Sezi, page 944 Figure 1) and operative to communicate said first power management data external to said IED (see Sezi, page 944 column 2 "I. Introduction" lines 4-8); a first interface coupled with said processor and said communications interface, said first interface operative to receive a first external function module, said first external function module comprising second power management functionality, wherein said first interface is further operative to facilitate implementation of said second power management functionality (see Sezi, page 950 column 1 "G. Tools for Settings and Configuration" line 4 – column 2 line 3).

Referring to claims 2 and 70, Sezi teaches that said first power management functionality comprises a first plurality of power management functions, said first interface being further operative to facilitate (see Sezi, page 951 Figure 14) said second power management functionality to disable a first subset of said first plurality of power management functions (see Sezi, page 946 column 1 lines 1-5).

Referring to claims 3 and 71, Sezi teaches that said second power management functionality comprises a second plurality of power management functions, said first interface operative to facilitate substitution of said second subset for said first subset (see Sezi, page 951 Figure 14).

Referring to claims 4, 5 and 72, Sezi teaches that said first power management functionality comprises a first set of register outputs stored in a memory (see Sezi, page 946 column 1 lines 5-12), said method further comprising: (i) facilitating said second power management functionality to utilize a subset of said first set of register outputs independent of said register outputs location in said memory (see Sezi, page 951 column 1 "I. Features and Tools for Event Reporting and Fault Analysis" lines 12-13).

Referring to claim 6, Sezi teaches that utilization of said set by said second power management functionality is not dependent upon a storage location of said set in said memory (see Sezi, page 945 column 2 lines 18-21).

Referring to claim 7, Sezi teaches that said first power management functionality comprises a plurality of power management functions, said first interface being further operative to facilitate said second power management functionality to supplement a subset of said plurality of power management functions (see Sezi, page 946 column 1 lines 1-12).

Referring to claim 8, Sezi teaches that said subset of said plurality of power management functions comprises a set of register outputs stored in a memory, said second power management functionality operative to add additional register outputs to said set (see Sezi, page 945 column 2 lines 24-27).

Referring to claim 9, Sezi teaches that said display and communications interface is capable of being utilized by said first external function module to communicate second power management data generated by said first external function module (see Sezi, page 948 column 2 lines 11-22).

Referring to claim 10, Sezi teaches that said second power management functionality implements a first communications protocol for use on said communication interface different from a second communications protocol implemented by said first power management functionality (see Sezi, page 949 column 2 lines 1-12 and Figure 11).

Referring to claim 11, Sezi teaches that said second power management data comprises parameter and setup information for said first external function module (see Sezi, page 948 column 2 lines 11-22).

Referring to claim 12, Sezi teaches that wherein said second power management data comprises results of computation performed by said first external function module based on said digital signal (see Sezi, page 951 column 2 lines 26-29).

Referring to claim 13, Sezi teaches that said communications interface comprises an R5-485 serial port (see Sezi, page 949 column 2 lines 28-32).

Referring to claim 17, Sezi teaches that said communications interface comprises an external device control port (see Sezi, page 949 column 2 lines 18-28).

Referring to claims 18 and 73, Sezi teaches that said interface communicates said digital signal to said first external function module (see Sezi, page 945 Figure 3).

Referring to claims 19 and 74, Sezi teaches that said digital signal is communicated to said first external function module continuously in real time (see Sezi, page 945 column 2 lines 5-8).

Referring to claims 20 and 75, Sezi teaches that said second power management functionality comprises computing kilowatts based on said digital signal (see Sezi, page 948 column 2 "D. Metering and Power Quality Analysis" lines 10-12).

Referring to claims 22 and 77, Sezi teaches that said second power management functionality comprises recording a waveform of said digital signal (see Sezi, page 951 column 1 "I. Features and Tools for Event Reporting and Fault Analysis" lines 7-9).

Referring to claim 24, Sezi teaches that said second power management functionality comprises recording data from said first power management functionality

(see Sezi, page 951 column 1 "I. Features and Tools for Event Reporting and Fault Analysis" lines 12-13).

Referring to claims 25 and 79, Sezi teaches that said first interface is capable of receiving said first external function module without uninstalling said IED (see Sezi, page 945 column 2 lines 7-11).

Referring to claims 27 and 80, Sezi teaches that said first interface is further operative to communicate with a second external function module coupled with said first external function module through said first external function module (see Sezi, page 949 column 2 lines 18-28).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sezi et al. ("New Intelligent Electronic Devices Change the Structure of Power Distribution Systems") (hereinafter Sezi) in view of Potega (U.S. Patent No. 6,459,175).

Referring to claim 14, Sezi teaches all the features of the claimed invention except that said communications interface comprises an infrared port.

Potega teaches said communications interface comprises an infrared port (see Potega, column 54 lines 58-60).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Potega because having an infrared port would have allowed the skilled artisan to connect the system wirelessly (see Potega, column 54 lines 58-60)

9. Claims 15, 26, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sezi et al. ("New Intelligent Electronic Devices Change the Structure of Power Distribution Systems") (hereinafter Sezi) in view of Schweitzer, III et al. (U.S. Patent No. 5,680,324) (hereinafter Schweitzer).

Referring to claim 15, Sezi teaches all the features of the claimed invention except that said communications interface comprises a network port.

Schweitzer teaches that said communications interface comprises a network port (see Schweitzer, column 2 lines 28-44).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Schweitzer because having a network port would have allowed the skilled artisan to connect multiple electronic devices to the system (see Schweitzer, column 2 lines 28-44).

Referring to claim 26, Sezi teaches all the features of the claimed invention except that said first interface is further operative to receive a plurality of said first

external function modules, each of said plurality of first external function modules comprising a second interface, wherein a first of said plurality of first external function modules is coupled with said first interface and subsequent of said plurality of first external function modules are sequentially coupled with each other via said second interface and wherein said first interface communicates with each of said plurality of first external function modules as though each was connected with said first interface.

Schweitzer teaches that said first interface is further operative to receive a plurality of said first external function modules, each of said plurality of first external function modules comprising a second interface (see Schweitzer, column 6 lines 54-64), wherein a first of said plurality of first external function modules is coupled with said first interface and subsequent of said plurality of first external function modules are sequentially coupled with each other via said second interface and wherein said first interface communicates with each of said plurality of first external function modules as though each was connected with said first interface (see Schweitzer, column 7 lines 27-48).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Schweitzer because sequentially coupling the function modules would have allowed the skilled artisan to connect to multiple electronic devices and facilitates gathering the requested data.

Referring to claims 34 and 35, Sezi teaches all the features of the claimed invention except that said first and second non-volatile memory comprises a flash memory.

Schweitzer teaches that said first and second non-volatile memory comprises a flash memory (see Schweitzer, column 5 lines 23-30).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Schweitzer because using flash memory would have allowed the skilled artisan to prevent loss of data in the event of power loss (see Schweitzer, column 5 lines 28-31).

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sezi et al. ("New Intelligent Electronic Devices Change the Structure of Power Distribution Systems") (hereinafter Sezi) in view of Burger ("The Utility Initiative for Interoperability Between Intelligent Electronic Devices in the Substation – goals and status").

Referring to claim 16, Sezi teaches all the features of the claimed invention except that said network comprises Ethernet.

Burger teaches that said network comprises Ethernet (see Burger, page 30 "Solutions" lines 6-7).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Burger because the Ethernet would have allowed the skilled artisan to increase functionality and reduce cost (see Burger, page 28 lines 13-15).

11. Claims 21, 28, 76 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sezi et al. ("New Intelligent Electronic Devices Change the Structure of Power Distribution Systems") (hereinafter Sezi) in view of Thomas et al. (U.S. Patent No. 6,380,949) (hereinafter Thomas).

Referring to claims 21 and 76, Sezi teaches all the features of the claimed invention except that said second power management functionality comprises computing harmonics based on said digital signal.

Thomas teaches that said second power management functionality comprises computing harmonics based on said digital signal (see Thomas, column 3 line 67 – column 4 line 3).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Thomas because computing harmonics would have allowed the skilled artisan to determine if there is a need for design changes.

Referring to claims 28 and 81, Sezi teaches all the features of the claimed invention except that a first connection of said second external function module to said first external function module and a second connection of said first external function module to said interface uniquely identifies each of said first and second external function modules for subsequent individual communications by said interface based on said first and second connections.

Thomas teaches that a first connection of said second external function module to said first external function module and a second connection of said first external function module to said interface uniquely identifies each of said first and second external function modules for subsequent individual communications by said interface based on said first and second connections (see Thomas, column 5 lines 21-41).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Thomas because identifying each module would have allowed the skilled artisan to facilitate module selection and data collection.

12. Claims 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sezi et al. ("New Intelligent Electronic Devices Change the Structure of Power Distribution Systems") (hereinafter Sezi) in view of Nobakht et al. (U.S. Patent No. 6,587,873) (hereinafter Nobakht).

Referring to claims 29 and 82, Sezi teaches all the features of the claimed invention except that said base module further comprises a first non-volatile memory operative to store first program code for execution by said processor, said processor being operative to access a second non-volatile memory in said first external function module via said first interface, said second non-volatile memory comprising second program code, said processor further operative to replace said first program code in said first non-volatile memory with said second program code.

Nobakht teaches said base module further comprises a first non-volatile memory operative to store first program code for execution by said processor, said processor being operative to access a second non-volatile memory in said first external function module via said first interface (see Nobakht, column 11 lines 32-39), said second non-volatile memory comprising second program code, said processor further operative to replace said first program code in said first non-volatile memory with said second program code (see Nobakht, column 11 lines 20-25 and lines 44-46).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Nobakht because replacing the code would have allowed the skilled artisan to prevent errors in the code and keep the most updated version of the code.

Referring to claim 30, Sezi teaches all the features of the claimed invention except that said processor is further operative to check said second program code for compatibility with said base module prior to replacing said first program code.

Nobakht teaches that said processor is further operative to check said second program code for compatibility with said base module prior to replacing said first program code (see Nobakht, column 11 lines 32-39).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Nobakht because checking for compatibility would have allowed the skilled artisan to prevent both hardware and software errors from occurring.

Referring to claims 31 and 83, Sezi teaches all the features of the claimed invention except that said processor is further operative to check a version identifier of said second program code and only replace said first program code if said version identifier identifies said second program code as a later version than said first program code.

Nobakht said processor is further operative to check a version identifier of said second program code and only replace said first program code if said version identifier identifies said second program code as a later version than said first program code (see Nobakht, column 10 lines 20-32).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Nobakht because version checking would have allowed the skilled artisan to keep the most updated code and dispose of older outdated code.

Referring to claims 32 and 84, Sezi teaches all the features of the claimed invention except that said processor is further operative to select said second program code from a plurality of program code stored in said second non-volatile memory based on compatibility with said base module.

Nobakht teaches that said processor is further operative to select said second program code from a plurality of program code stored in said second non-volatile memory based on compatibility with said base module (see Nobakht, column 11 lines 32-39).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Nobakht because checking for compatibility would have allowed the skilled artisan to prevent both hardware and software errors from occurring.

Referring to claims 33 and 85, Sezi teaches all the features of the claimed invention except that said processor is further operative to select a correct version of said second program code from a plurality of program code stored in said second non-volatile memory, each of said plurality of program code characterized by a different version.

Nobakht teaches that said processor is further operative to select a correct version of said second program code from a plurality of program code stored in said second non-volatile memory, each of said plurality of program code characterized by a different version (see Nobakht, column 11 lines 32-39).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Sezi to include the teachings of Nobakht because version checking would have allowed the skilled artisan to keep the most updated code and dispose of older outdated code.

Allowable Subject Matter

13. Claims 23 and 78 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) Lohmann et al. teach enhanced customer value enabled by synergies between protection and control in high voltage substations.

(b) Swartz teaches interoperability of intelligent electronic devices in a substation.

(c) Jovellana teaches an automatic utility meter monitor.

(d) Przydatek et al. teach a method and apparatus for automatically controlled gain switching of monitors.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Kate B Baran whose telephone number is (703) 305-4474. The examiner can normally be reached on Monday - Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (703) 308-1677. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

MKB

MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800